

# THE CONDOR

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Ornithology

Volume IV

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Number 5



COOPER ORNITHOLOGICAL CLUB

Santa Clara, California

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## A Check-list of California Birds

CONSTITUTING

### Pacific Coast Avifauna, No. 3.

BY JOSEPH GRINNELL.

**It gives synonyms, seasons of occurrence and the range of 491 species  
and subspecies of birds known to inhabit California.**

This Check-list was issued June 20th and constitutes the *first complete list of California birds ever published*, containing also a Hypothetical List of 33 species. Colored maps illustrate the Life Zones and Faunal Areas of the state.

The range of each subspecies has been carefully defined, this feature alone rendering the list invaluable to the field worker. Changes have been made in the common names of some species, based upon their geographical range. This and other features, it is considered, will prove a great help to the amateur bird student.

This list has been compiled only after a thorough examination of all available literature and will be found complete to the present day. Every Californian worker will find it invaluable.

**Price, 75 Cents, postpaid.**

Address C. BARLOW, Bus. Manager,  
Santa Clara, Cal.





# The Condor

A MAGAZINE OF WESTERN ORNITHOLOGY

Bi-Monthly Bulletin of the Cooper Ornithological Club

Vol. 4. No. 5.

Santa Clara, Cal., September-October, 1902

\$1.00 a Year

## IN MEMORIAM:

Dr. James G. Cooper.

OUR beloved honorary member and distinguished naturalist, Dr. James G. Cooper has passed away, and with him we lose a man of sterling worth and lofty character, a man who has gained an enviable reputation in his chosen subject of Natural History, and who has left many and valuable works in the field of Ornithology.

It seems but a few years since I first met this slender gentleman in the small country postoffice which he held in connection with the only drug store in Haywards. That was in 1877. Three years ago last March he sat among us, for the last time in public, for the study of his favorite work, ornithology.

Tho not of a strong constitution, he has been the last to answer the final call of the Creator, of that original group of naturalists gathered around the side of Prof.

Baird in the early days of the Smithsonian Institution.

Dr. Cooper's life was one of strong work, earnestly done, as one who clear-

ly saw the facts of natural science, and who fully appreciated the bearing of one branch of zoology upon another, and upon allied subjects. This will be noted in his early study of forests and distribution, and many are the younger zoologists who will think of him in future years when they consult his work on the coast faunal ranges. He was a man who could lead you in paths of Nature to the haunts of birds, to the lurking places of shells, or to hidden fossils, and could



DR. JAMES G. COOPER.  
Born June 19, 1830. Died July 19, 1902.  
FROM A PHOTO TAKEN IN 1885.

name for you the rocks, trees and plants of the mountains, hills and plains.

Dr. Cooper is best known to us by his works on conchology and ornithology.

Of the former there are forty-three separate papers and of the latter twenty-six. His most important work was "Land Birds" in the Geological Survey of California, and usually known as "Ornithology of California." This book was edited by Prof. Baird and includes most of the land birds west of the Rocky Mts.

His was a quiet unassuming life, passed amid the simple surroundings of his home. He was a tall, spare man of

forests, and could never bear to see a tree cut down, or even have it used for fuel in his home. There stands beside his home today a tall California laurel, which was transplanted from a near ravine as a little sapling, and which now overtops his home. It was early in life that the naturalists' traits manifested themselves, as he says in his autobiographical summary. "I was noted for planting toothpicks to raise geese, and for hugging goslings to death, a bud-



HOME OF THE LATE DR. J. G. COOPER.

PHOTO BY W. O. EMERSON.

soldiery bearing, with a dark beard well silvered, clear blue eyes, delicate hands, a voice slow and not given to a ready flow of language. But when touched on his favorite topic, the man was forgotten, and he impressed you as one of the true worshippers at Nature's shrine—a noble man of lasting worth. At times he was humorous, when stirred by the reminder of some early days of exploring among the mountains and fields. Dr. Cooper was a great lover of

ding of ornithological tastes. This occurred in 1837 and continued, say, to 1840. I went to a country school in summer, walked a mile over hills and bad roads, taking side paths thru the fields to hunt bird nests, shells and reptiles, which I preserved till some naturalist captured the specimens for little or nothing. The most noted of these captures was a living copper-head snake which my sister Mary and I found while crossing a newly cleared field, and

which finally went alive to England. I had many hunts for quadrupeds and preserved some up to the size of gray and fox squirrels, besides keeping red and flying squirrels, a racoon, opossum, and other animals as pets, which attracted much interest among visitors. I had a boy's mania for hunting, and altho I could only get small animals and birds, I spent many a day in shooting, no doubt with impoverishment to physical health. I would wade thru snow knee-deep for miles with poor results as to game, but thought if I ever went into a wild country the hunter's life would be my choice. Why man could not live happy on the natural products of the forests and streams was a problem I expected to solve in the future. About this time Tanner's 'Thirty Years Among the Indians of Canada' showed me much of the difficulties in the way of such a mode of existence."

In this we have a little retrospect into the early life of Dr. Cooper from his own pen. The tendencies thus early manifested were fostered by his father, to whom Dr. Cooper owed his preparation for his later work in life, and it was at the home of William Cooper that such men as Samuel L. Mitchell, M. D., Nathaniel Paulding, poet, Dr. John Torrey, the botanist, Prof. Eaton, and Lucien Bonaparte were wont to meet. It is not difficult to see how these men

may all have exerted a profound influence on the mind of the young naturalist. At the age of twenty-eight, Dr. Cooper became a member of the New York Lyceum, now the New York Academy of Sciences, his father, at the age of nineteen, having been one of the founders. Dr. Cooper was one of the early members of the California Academy of Sciences, holding for several years the office of vice-president and for some years being curator of the section of palæontology, which he had given much time to build up. His last actual work was the compiling of a Catalog of California Fossils, issued as Bulletin No. 4 by the California State Mining Bureau, Sept. 1894, Parts II, III, IV and V.

Dr. Cooper is the last of that circle of distinguished naturalists, who had been the foremost zoologists and botanists in his early days. Such men as Asa Gray, Baird, LeConte, Hayden, Meek, George Gibbs, Torrey, Warren and Dr. Suckley were his collaborators. To the memory of Dr. Cooper we can have no better monument than the valuable researches which he carried on for over forty years of his life, consisting of some seventy-five papers on the birds, shells, fossils, geology, forests and flora of the Pacific Coast.

W. OTTO EMERSON,  
Haywards, California.

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### The Ornithological Writings of Dr. J. G. Cooper.

BY JOSEPH GRINNELL.

IN the present paper I have listed all the ornithological writings of the late Dr. Cooper known to me. These number twenty-six. It will be noted that the majority were printed between 1860 and 1880. While the number of Cooper's titles was not great, his articles thus appeared at a time when much less was written on birds than now, and when much of the subject-matter we might now regard as commonplace

was new information altogether. As all but two of his publications pertained at least in part to the birds of California we of the Cooper Ornithological Club owe much to Dr. Cooper as being a pioneer in our line of study. Perhaps his best known work is his "Ornithology of California" which is a desideratum of every working bird-student. Aside from his signed articles, Cooper furnished material, in the way of speci-



mens and manuscript notes, which was used by Baird in 1858 and 1864, and especially by Baird, Brewer and Ridgway in their colossal "History of North American Birds," 1874 and 1884.

Birds which have been named in honor of Dr. J. G. Cooper are *Buteo cooperi* CASSIN (status now in doubt), *Podiceps cooperi* LAWRENCE (= *Colymbus holballi*), *Pyranga cooperi* RIDGWAY (= *Piranga rubra cooperi*) and *Melospiza fasciata cooperi* RIDGWAY.

1860. Pac. R. R. Rep. XII. Book II. 1860 —Part III. Route near the forty-seventh and forty-ninth parallels, explored by I. I. Stevens, Governor of Washington Territory in 1853-55. Zoological Report. — No. 3. Report upon the Birds collected on the Survey. Chapter I. Land Birds, by J. G. Cooper, M. D. Chapter II. Water Birds, by Dr. G. Suckley, U. S. A. pp. 140-291, 8 Pl. (This was Cooper's first published article on ornithology and pertains chiefly to the birds noted during the survey of Oregon and Washington. There are also a few references to Californian species, of particular note being his account of the capture of the unique type of *Buteo cooperi* Cassin, at Mountain View, Santa Clara County. Although Cooper and Suckley present separate authorship for the "Land Birds" and "Water Birds," respectively, each evidently contributed written accounts to both chapters. Cooper's initial as a rule follows the most extended and detailed field-notes.)

1861. New Californian Animals. —Proc. Cal. Ac. Nat. Sc. II, July 1861, pp. 118-123. (Cooper here definitely records from the southeastern part of the State *Panyptila melanoleuca* [= *Aeronautes melanoleucus*], *Chordeiles texensis*, *Tyrannus vociferans*, *Vireo belli* [= *V. pusillus*], *Harporhynchus* [= *Toxostoma lecontei*, *Icterus cucullatus nelsoni*], and *Hydrochelidon plumbea* [= *H. surinamensis*] as well as others from Fort Mojave. He also describes two new species from Fort Mojave, *Athene whitneyi* [= *Micropallas whitneyi*] and

*Helminthophaga lucia*).

1865. On a new Cormorant from the Farallone Islands, California. —Proc. Ac. Nat. Sc. Phil., January 1865, pp. 5-6. (Description of *Graculus Bairdii* [= *Phalacrocorax pelagicus resplendens*.])

1868. Some Recent Additions to the Fauna of California. —Proc. Cal. Ac. Sc. IV, November 1868, pp. 3-13. (Mention, with occasional critical remarks, of forty-five species, some of them for the first time recorded from the State.)

1869. The Fauna of Montana Territory. —Am. Naturalist, 1869; II, January, pp. 596-600; III, March, pp. 31-35; April, 73-84. Corrections, June, p. 224. (More or less extended notes on about 110 species of birds.)

1869. The Naturalist in California. —Am. Naturalist III; June, pp. 182-189; November, pp. 470-481. (Field-notes on many birds observed on the Los Angeles Plains, at Cajon Pass, along the Mojave River, and in the vicinity of Fort Mojave, which latter place, however, is on the Arizona side of the Colorado River.)

1869. Notes on the Fauna of the Upper Missouri. —Am. Naturalist III, August 1869, pp. 294-299. (Includes numerous ornithological notes.)

1870. Geological Survey of California. | J. D. Whitney, State Geologist. | — | Ornithology. | Volume I. | Land Birds. | Edited by S. F. Baird, | from the Manuscript and Notes of | J. G. Cooper. | — | Published by authority of the Legislature. | 1870. pp. i-xi, 1-592; with a great many figures. (This, Cooper's greatest work, includes the birds of all the region west of the Rocky Mountains. Most of the text is in the nature of biographical accounts, and included most of what was known at the time of publication. The technical parts were prepared by Baird.)

1870. The Fauna of California and its Geographical Distribution. —Proc. Cal. Ac. Sc. IV, February 1870, pp. 61-81. (Contains separate lists of birds for different localities, including those



observed on several of the Santa Barbara Islands).

1871. Monterey in the Dry Season. —Am. Naturalist IV, February 1871, pp. 756-758. (Running account of thirty species of birds observed in the vicinity of Monterey.)

1874. Animal Life of the Cuyamaca Mountains.—Am. Naturalist VIII, January 1874, pp. 14-18. (Brief mention of 84 species of birds observed in the vicinity of the Cuyamaca Mountains, San Diego County).

1874. "Verbal Remarks." —Proc. Cal. Ac. Sc. V, December 1874, pp. 414-415. (Specimens of *Uria lomvia*, which later proved to have been the young of *Uria californica*, and *Stercorarius parasiticus* from the coast of California.)

1875. Notes on California Thrushes. —Am. Naturalist IX, February 1875, pp. 114-116. (Corrections in regard to the "Ornithology of California:" *Turdus ustulatus* and "*T. nanus*.")

1875. New Facts relating to Californian Ornithology—No. 1. —Proc. Cal. Ac. Sc. VI, December 1875, pp. 189-202. (Extended critical and biographical notes on a number of the less known species.

1876. Early nesting of the Anna Hummingbird. —Am. Naturalist X, January 1876, pp. 48-50. (In the vicinity of Haywards).

1876. Californian Garden Birds. —Am. Naturalist X, February 1876, pp. 90-96. (Running account of about forty species nesting in the neighborhood of Haywards. Incidentally Cooper names and characterizes on page 91 a western race of the Tree Swallow, "*Hirundo bicolor* var. *vespertina*." It is interesting to note that this was the only "variety" or subspecies Cooper ever named, for as shown by most of his writings he did not lean strongly toward trinomialism. In spite of the fact that *vespertina* was ignored by Cooper's contemporaries, and has until now remained almost completely buried, there seems to be a distinguishable

western race of the Tree Swallow, and this should be known as *Tachycineta bicolor vespertina* (Cooper).

1876. Nesting Habits of the Californian House Wren (*Troglodytes aedon* var. *parkmanni*). —Bull. Nutt. Orn. Club I, November 1876, pp. 79-81.

1877. On Seventy-five Doubtful West coast Birds. —Bull. Nutt. Orn. Club II, October 1877, pp. 88-97. (Remarks concerning numerous species attributed to California by early writers, but the occurrence of which is now doubtful).

1878. Californian Prairie Chickens. —Bull. Nutt. Orn. Club III, April 1878, p. 96. (On the status in California of *Tetrao columbianus* [= *Pediocetes phasianellus columbianus*].)

1880. On the Migration and Nesting Habits of West-coast Birds. Proc. U. S. N. M. II, January 1880, pp. 241-251. (A list of 73 species, with dates of migration and nesting at several points in California).

1886. The 'Water Birds of North America'—A Few Corrections. —Auk III, January 1886, pp. 124-126. (Relating to the notes on California birds incorporated from Cooper's writings into Baird, Brewer and Ridgway's work).

1886. The 'Water Birds of North America'—Explanations. —Auk III, July 1886, pp. 401-402.

1887. Additions to the Birds of Ventura County, California. —Auk IV, April 1887, pp. 85-94. (Extended notes on 29 species, with mention of many more).

1890. Note on Pacific Coast Birds. —Auk VII, April 1890, pp. 214-216. (Explanations in regard to the "Ornithology of California.")

1890. A Doomed Bird. —Zoe I, October 1890, pp. 248-249. (The California Vulture).

1891. Unusual Nesting Place of *Empidonax hammondi*. —Zoe II, July 1891, pp. 104-107. (Breeding at Haywards).

## A Letter from Dr. Coues to Dr. Cooper.

THE following letter, contributed by Mr. Emerson, is of interest just now, in connection with the life of Dr. Cooper. We have here a glimpse into the past, showing us at once the friendship existing between Dr. Cooper and Dr. Coues, and the esteem in which Cassin was held by his fellow workers.

Fort Macon, North Carolina.  
February 21, 1869.

MY DEAR COOPER:

I have not heard from you for so long, that I don't recollect which one of us owes the other a letter; but that's no great matter after all! I have received the two copies of your paper so kindly sent, and read them with unusual interest and profit. You quote me, I notice, very extensively. I have not the papers by me or I should like to make a few notes that struck me on first perusal. I consider the paper a highly interesting and very valuable one. That one now printing in the "Naturalist" will also be of great practical service. Please let me have a copy of all that you write. I understand that your large work will be out before long. I think I have seen it announced, in print, in some publisher's prospectus, but can not recall definitely. I look for it with eager interest. I have sent you, I think, all the papers that I have published since my "Prodrome," directing them for want of more definite address to care of the S. F. Nat. Hist. Soc. Have you received them? A short one, "List of Birds Collected in Arizona by Dr. Ed. Palmer," bears directly upon your work. He got on the Gila desert 3 species not previously attributed to the Territory; and several kinds of eggs not before known to the ornithologists. My large work still remains in MSS; but is about ready for the press. I have about 2500 pages of MSS. Yours and mine together will, I think, about use up the subject. Yours has the great desideratum of mine—illustrations. I

know these will be GREAT; have seen the proofs of a great many of them, and they are first rate. Best things out since Cassin's and the Pac. R. R. Reports!! I deeply regret that my book can boast of nothing of the sort; but I have no means of procuring any such desirable embellishments.

After my long stay at Columbia, over 2½ years, I am at length moved. Fort Macon is on one of the long islands off the coast of North Carolina just opposite Beaufort. I did comparatively little at Columbia in the bird line, my position being a very onerous one as regarding official duties. I only managed to collect data for a Synopsis of the Birds of the State (a copy of which I sent you). Although the birds are of course well known in the general run, I thought that a new carefully prepared list might find an acceptable place in our chronicles. I have as much time here at my disposal as you seem to have at drum barracks, and I hope to put it to good account in the line of ornithological studies. I have never before lived on the South Atlantic seaboard.

Of course you heard the sad, sad news that John Cassin's labors are ended. The loss to Science none of us can measure; nor can those privileged to call him friend adequately express the depth of that bereavement. And many as are our American ornithologists—high as some stand in American ornithology—there is none left in all our land who can lift up the mantle that has fallen from his shoulders. His good work is accomplished, and he has gone to reap the rich reward of a life nobly spent in the survey of Nature's beauties, in drinking from the perennial fountain of Nature's truths. Since Audubon passed away from the scene of his usefulness, death has struck no such cruel blow to our beloved science. As Dr. Brewer has said to me, "which one of our younger ornithologists will

undertake to stand, after thirty-five years of training, where Cassin stood at his death?" The all-worthy time-honored quartette has been rudely broken. Now only a triangle, Lawrence, Brewer and Baird, remains of the last generation of American ornithologists. Who shall lead opinion when they too are gathered to their fathers? A higher trust than we perhaps appreciate, is laid upon the few of us of this later day who pay devotion to the beautiful study of ornithology. It is no less than the keeping bright and untarnished,

and transmitting to our successors, the name and fame of the science that has absorbed such minds as those of Wilson, Nuttall, Audubon, Bonaparte and Cassin. May we prove worthy servitors, guarding with jealous care our trust, watchful that the vestal fires shall ever burn at the shrine where we worship with a clear and steady flame.

Ever yours, faithfully,

ELLIOTT COUES.

DR. J. G. COOPER,  
Acad. Nat. Sciences,  
San Francisco, Cala.

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#### Some Observations on the Rufous-crowned Sparrow.

BY C. BARLOW.

THOSE who go afield after the first glories of spring have vanished, when the foxtail along the roadside and the short grass on the hills have taken on an uninviting appearance, have doubtless noticed that most of the birds have settled along the water courses, and that save for an occasional kingbird, lark sparrow and the like the parched hills appear deserted.

Yet my subject deals with a small, rather steep hillside, where from May to September the heat dances dizzily over the thin sage growth and where life to most of us would be intolerable. Here a small colony of rufous-crowned sparrows (*Aimophila ruficeps*) have contentedly established themselves, and they lead an altogether busy life searching along the old stone wall which separates the pasture from the road. Considerable travel passes along the road but it seems in nowise to disturb them and they are really a sociable colony.

How long the birds have frequented this sparsely-covered hill I do not know, but they were there to my knowledge to 1896 and perhaps have been there for decades. This particular hill possesses a decidedly scraggly growth of sage, and why it was chosen in preference to some heavily covered hill which might afford secure protection, is

best known to the birds themselves. Perhaps the stone wall mentioned and the adjacent road afford a generous food supply. It should be mentioned also that a small country schoolhouse lies just across the road, so, withal, this particular band of *Aimophila* cannot be termed as exclusive as we should expect individuals of this genus to be.

The population of this colony can only be speculated upon. A small series including a number of juveniles was collected here by Mr. Grinnell and myself in September, 1901. To be exact some eighteen specimens were taken within an area of two or three acres, and some interesting plumages were represented. Whether there had been an influx of birds from the surrounding hills or not I do not know, but on the same day other seemingly inviting sage hills seemed not to harbor a single sparrow. Thus I am inclined to believe that they are not uniformly distributed over this range of hills, even in the most inviting and suitable territory.

#### PUBLISHED DATA.

We are indebted to Mr. William Brewster for the first published account of the nidification of the rufous-crowned sparrow. In the *Bulletin of the Nuttall Ornithological Club* (II, p. 37, 1877) under the caption 'Two Undescribed

Nests of Californian Birds' he describes a nest found by Chas. A. Allen on July 10, 1875. It "contained three pure white eggs which measure .89 of an inch in length by .65 in breadth. . . . and the nest was placed on the ground under a bush." The locality is described as an open heathy tract on a mountain side.

Subsequent\* to this Mr. Brewster published further observations on this species by Mr. Allen, dealing with the time of arrival, the song and general wariness of the bird. He states also that

#### GENERAL OBSERVATIONS.

My visits to the home of the rufous-crowned sparrow this year began on March 23 according to my note book. The day was bitterly cold with a north wind, and not conducive to bird investigations. At the colony I was greeted by a male on the stone wall and I approached to within fifteen feet. Then its mate came into view and both hopped about in the grass near the sage-brush, allowing me to come within ten feet of them. On going up the hill I saw two more pair but decided



PHOTO BY BARLOW.

HAUNTS OF THE RUFOUS-CROWNED SPARROW.

the birds depart for the south before winter sets in. In the *Osprey* (II, p. 27 1897) L. P. Williams describes briefly the nesting of this species in San Bernardino Co., Cal., stating that the nests are built under grass tufts, and that four or five eggs are laid, which are "crystalline white" when blown. So far as I can learn this comprises all that has been published on the nesting and habits of the rufous-crowned sparrow.

\**Bull. N. O. Club.* IV, p. 47, 1879.

they were not yet nesting. The presence of numerous *Zonotrichia* in the sage made a search for a nest impracticable. I had an excellent chance to hear and verify one of the songs of *Aimophila*. It was given frequently,—a weak song, well expressed by *te-a-te-tree-e-e*, the last note being as long as the three preceding ones. This particular song was not heard so often later in the season.

On March 30 a visit to the hillside failed to reveal a single bird, they hav-

ing become very secretive. A tramp through the sage failed to flush any individuals. April 27 was destined to prove more fruitful of success, and I quote my notes for the trip: "We drove over to the sparrow district this morning. It was a beautiful day for bird-life. We both went over the hill and along the stone wall, and in the sage could be heard the shrill call note of the sparrow and occasionally its song. Apparently several pairs are breeding in the patch. Arkansas goldfinches were flitting and twittering about the hill and one flushed from a sage bush where I found its nest and four eggs in a crotch three feet up.

"We then beat back and forth at random in the sage, now and then catching a glimpse of a rufous crowned sparrow or hearing its song. But any attempt at watching one to its nest seemed a most improbable thing. At this season the birds are very secretive and while one can work up to within gun-shot the birds were ready to change positions at the least alarm. The males evidence some interest for although they would sit on a fence seventy-five yards away and sing with apparent nonchalance for five minutes, eventually they would flit across to the sage somewhere near the intruder and watch his movements. I was tiring of the rather monotonous beating through the sage when J—— excitedly called to me and told me of a nest and four 'white' eggs on the ground. I went over and looked in under a small sage where the nest was easily seen when you knew it was there!

"The nest was sunk flush in the ground, being built partly under a sage root, and contained four eggs with a very perceptible light bluish tinge. Upon blowing one egg was found infertile and the others were but slightly incubated. We sat down at a distance but not a sound came from the female, who had flushed and disappeared. After perhaps ten minutes of quiet watching the bird appeared up the hill

but was extremely wary. She flew past the bush and alighted, but would not go to the nest. Then she flew up the hill again, when I collected her. Dissection showed the set to be complete. Further search failed to reveal any other nests for the day.

"This sparrow has an alarm, *quirk*, *quirk*, *quirk*, very similar to the rock wren. It is uttered also as a spontaneous note at times. The real song has been likened to that of the lazuli bunting but I see little resemblance save in the general trilling style. The sparrow's note is much stronger, a combination of warble and trill which it would be quite useless to attempt to write. It seems to me quite distinct from other bird songs and is uttered indiscriminately either from a perch, from the sage, or when the bird is on the ground."

The nest mentioned was substantially built as may be seen from the illustration. It was composed outwardly of grass, grass roots, a few small twigs and fibers. The lining was almost entirely of horsehair. The outside diameter was six inches, the inside three inches. Depth inside,  $1\frac{1}{2}$  inches; outside, three inches. The front or exposed rim of the nest was much thicker than the back. The eggs were four in number, possessing a slight bluish tinge both before and after blowing.

In this connection it may be interesting to mention that the eggs of this sparrow seem to be possessed of two types of coloration some sets being pure white, while others have the bluish tint. Four sets which are known to be in existence show the following coloration: Mr. Brewster's set of three eggs, he informs me, are pure white; a set collected by Mr. H. S. Gay in San Bernardino Co. and kindly loaned me for inspection, are pure crystalline white in color; a set collected by Mr. R. H. Beck in Monterey Co., Cal., June 25, 1894, is now in the National Museum collection. Dr. Wm. L. Ralph informs me that the eggs are "certainly of a light bluish color." The set collected

by myself also has the bluish tint. Just why this sparrow should lay two types of eggs is a problem.

In addition to the sets possessed by Mr. Brewster and the National Museum, and the one collected by myself, the following nesting dates may prove of interest: April 23, 1893, four fresh eggs, found by L. P. Williams, San

served; May 2, 1897, five eggs, destroyed by unknown cause; May 26, 1897, four eggs on point of hatching; June 1, 1899, three eggs badly incubated and not preserved.

#### FOOD.

Through the kindness of the Biological Survey I am enabled to give the results of the examination of twenty-two



NEST AND EGGS OF RUFOUS-CROWNED SPARROW.  
(About  $\frac{2}{3}$  natural size.)

Showing substantial outer rim on exposed side.

PHOTO BY BARLOW.

Bernardino Co., set not preserved. The following nests were discovered by Mr. Harold S. Gay in the same locality and embrace those mentioned by Mr. Williams in his article in the *Osprey*: May 1, 1896, four eggs which were found destroyed on visiting the nest two days later; May 3, 1896, four eggs, set pre-

stomachs, which were made by Prof. F. E. L. Beal. In two stomachs collected by Prof. Beal on June 27, 1901, the average of vegetable matter was 97% and of animal matter 3%. In eighteen stomachs collected by Mr. Grinnell and myself on Sept. 22, 1901, the average of vegetable matter is 88.4% and of ani-



mal matter 11.6%; one stomach collected March 16, 1902, vegetable and animal matter each 50%; one stomach collected April 27, 1902, vegetable matter 6% and animal matter 94%. The food of the June specimens consisted of small oats, *Erodium*, grass seeds and Hymenoptera. Those taken in September had a more varied bill of fare, consisting of crickets, carabid beetles, ants, grasshoppers, Hymenoptera and one olive scale, chickweed, *Polygonum*, *Amaranthus*, *Erodium* and oats. Grasshoppers in the animal and wild oats in the vegetable food seem to largely predominate. One March stomach contained Hymenoptera and Hemiptera and unidentified seeds, while the April specimen showed Chrysomelid and

Lampyrid beetles, Jassids, Arachnids, oats and *Erodium*.

I believe the rufous-crowned sparrow to be resident in this locality, since I have collected them in September, November and March, and the abundance of food and mild winters would seem to suggest no necessity for migration. Despite the natural secretiveness of the species in breeding season I do not consider it wary at other seasons and its acquaintance may be easily cultivated. To my fancy the very solitude which this bird seeks makes it the more interesting to the ornithologist and I shall look forward to further investigation of its sage brush home with renewed interest.

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### The Redwood Belt of Northwestern California.

#### I. FAUNAL PECULIARITIES OF THE REGION.

BY WALTER K. FISHER.

THE northwest coast district of the United States is possessed of a peculiar interest ornithologically. It is a region of heavy rainfall and of dark forests, and not a few pale interior birds are here presented by more deeply colored races. For the student of geographical distribution it has also many attractions because such unusual conditions prevail. Combined with a long summer of comparatively low temperature for the latitude are frequent fogs and not a few rains. The proximity to the ocean has much to do with the equable climate, but the summer fogs and light rains more than anything perhaps are responsible for the temperature, since they greatly reduce the number of sunny days, and thus pull down very decidedly the sum total of heat for the season of reproduction. To the peculiar summer fogs and rain are also due the heavy forests and rank vegetation, and to both the fogs and forests the dark races of birds.

Without thinking one is prone to connect the intensity of coloring in the birds of this particular region directly with the heavy rainfall, as if the moisture itself in some manner acted to produce these deeper tints. In the same way the lack of rain in desert regions is sometimes invoked to explain the faded coloration of many of the desert-loving species. But, omitting the effect of the different rates of abrasion in humid and dry climate, the intensity of *color* itself seems more directly due to the proportion of cloudy days, irrespective of moisture, during the season of reproduction. With cloudy days is ranked also the semi-daylight of dark forests. Many of the humid belt birds spend their winters in the drier interior when the rainfall is heaviest in their breeding areas. They would therefore lose in a large degree any 'benefit' that the rain itself might confer, granting it possessed any sovereign influence. We must remember that the total rainfall of the Transition of the central Sierra Nevada exceeds that of Eureka in the so-called humid belt. But the rainstorms of the Sierra are very heavy, of short duration,



and rather scarce in summer. The number of sunny days each year is remarkably high. The quail, flicker, hairy woodpecker, Steller jay, white-crowned sparrow, creeper, and chickadee of the Sierra are either paler, or have more white in their plumage than their representatives in the coast belt. We might, for illustration, imagine a desert beset in summer with heavy fogs, *but having scarcely any rain*. Such a region would probably produce rather dark races of birds. On the other hand a fogless region of comparatively heavy rainfall of peculiar distribution, such as the Sierras, produces light races. It is reasonable to suppose—and tho we take it readily for granted it is not proved entirely—that the dark colors of the northwest coast birds have been assumed in response to protective natural selection. In other words a *dark* bird, or one with little white in its plumage is less conspicuous during the critical nesting period under sombre skies, or in a gloomy forest than a lighter bird, or a bird with considerable white in its plumage. Conversely, in the brilliant sunlight of the Sierra Nevada a lighter phase of this same species is less conspicuous than a dark form would be. The point to be emphasized of course is that moisture on the whole is only indirectly responsible for the dark races—and is indirectly responsible by its peculiar distribution in the form of fog and clouds thruout the summer.

In the following notes it is my object to record a few observations on the life zones and land birds\* of the little-worked redwood belt, from Humboldt Bay to Crescent City, California. I landed at Eureka May 20, 1899 and spent a week in the vicinity of Arcata, at the end of Humboldt Bay. This is in the more open long ago lumbered district close to the coast. From June 8 to '21 I staid at a lumber camp north of Mad River close to a large tract of dense primeval forest. Then after spending a few days on the outer peninsula of Humboldt Bay I travelled up the coast by stage, stopping at Trinidad Head, the vicinity of which is lumbered off. One evening was spent at the mouth of the Klamath, and June 29 to July 8 at Crescent City, in the extreme northwest corner of the state.

The redwoods occupy a narrow belt next to the coast from the southwestern corner of Oregon (Chetco R.) to about twelve miles south of Punta Gorda, Monterey County. North of San Francisco Bay the belt is almost unbroken and assumes its greatest width in the country between Cape Mendocino and Humboldt Bay. From Humboldt Bay north the strip scarcely ever exceeds fifteen miles in width. The redwoods typically occupy the low hills and valleys next to the coast, and in the northern portion of their range probably never go over a thousand feet. In the vicinity of Humboldt Bay the belt ends abruptly at the first low range of mountains back of the coast.

It is a hazardous undertaking to define precisely the life zone of this strip, from Cape Mendocino north, for the simple reason that the belt is mixed zonally. There seems little doubt that south of Cape Mendocino the redwood belt is referable to the Humid Transition. Considerable confusion exists however as to the proper position of the coast belt north. Dr. Merriam, in 'Life Zones and Crop Zones,' places it as a division of his Canadian, but without remark. Other authors in an indefinite way have called the whole coast region boreal without differentiating the redwood belt from the quite different mountainous district just to the east of it. A little detail seems necessary in dealing with the subject.

But in a general way the open country immediately bordering the coast, the river valleys such as those of the Eel and Mad, and old deforested tracts, mostly near the coast and in or near the valley of the principal streams, contain species of birds and plants which would easily relegate these areas to the Humid Transition. The same is true of the mountains immediately to the east of the redwood

\*To be published as part II, CONDOR IV, No. 6.

belt, many of which rise to a height of several thousand feet. The narrow open coast belt extends up the coast to the Columbia, with a few interruptions. Near Crescent City it assumes the form of a Transition coastal plain several miles in width. Diagnostic plants of these Transition areas are:

<i>Acer macrophyllum</i>	<i>Populus trichocarpa</i>
<i>Arctostaphylos 'lomentosa'</i>	<i>Osmaronia cerasiformis</i>
<i>Azalea occidentalis</i>	<i>Pseudotsuga mucronata</i>
<i>Baccharis pilularis</i>	<i>Quercus densiflora</i>
<i>Brodiaea capitata</i>	<i>Rhododendron californicum</i> (also boreal)
<i>Castanopsis chrysophylla</i>	<i>Rhus diversiloba</i>
<i>Ceanothus thyrsiflorus</i>	<i>Ribes malvaceum</i> (type)
<i>Cornus nuttalli</i>	<i>Rhamnus purshiana</i>
<i>Corylus rostrata californica</i>	<i>Rubus ursinus</i>
<i>Fraxinus oregana</i>	<i>Scrophularia californica</i>
<i>Garrya elliptica</i>	<i>Vaccinium ovatum</i>
<i>Opulaster monogynus</i>	<i>Umbellularia californica</i> (river valleys only)
<i>Myrica californica</i>	
<i>Philadelphus [lewisii?]</i>	

In the mountains just to the east of the redwood belt, *Pseudotsuga mucronata* is the prevailing forest tree—a typical Transition species, as are also *Castanopsis chrysophylla*, *Quercus californica*, *Quercus densiflora*, *Quercus chrysolepis*, and *Arbutus menziesii*, which occurs here. Within about twenty-five miles of the coast in the latitude of Eureka, and fifteen in the latitude of Crescent City, the Humid Transition merges into the Arid Transition.

The extensive lumbering activities in the vicinity of Humboldt Bay have permanently laid bare large tracts of country. The original Canadian nature of such tracts has been completely changed, and several species of transition plants, originally inconspicuous or wanting in the cold adverse conditions of the forest floor, have taken a new lease on life. These, with the intrusion of other Austral types have actually changed the zone. The open country has been rapidly invaded by Austral birds. Such species are:

<i>Lophortyx californicus</i>	<i>Carpodacus m. frontalis</i>
<i>Zenaidura macroura</i>	<i>Carpodacus p. californicus</i>
<i>Cathartes aura</i>	<i>Astragalinus t. salicamans</i>
<i>Buteo b. calurus</i>	<i>Melospiza c. cleonensis</i>
<i>Falco sparverius</i>	<i>Spizella s. arizonæ</i>
<i>Chordeiles virginianus</i>	<i>Pipilo m. oregonus</i>
<i>Selasphorus alleni</i>	<i>Zamelodia melanocephala</i>
<i>Tyrannus verticalis</i>	<i>Cyanospiza amœna</i>
<i>Sayornis n. semiatra</i>	<i>Petrochelidon lunifrons</i>
<i>Empidonax difficilis</i>	<i>Tachycineta bicolor</i>
<i>Corvus americanus</i>	<i>Helminthophila c. lutescens</i>
<i>Agelaius g. californicus</i> (?)	<i>Dendroica aestiva</i>
<i>Sturnella m. neglecta</i>	<i>Chamæa f. phæa</i>
<i>Scolecophagus cyanocephalus</i>	<i>Sialia m. occidentalis</i>

These species, originally restricted to the narrow river valleys and open coast belt have since acquired a much wider distribution in this region. Many species have undoubtedly greatly increased in numbers since the advent of settlers, and possibly a few are recent intrusions.

The Canadian, in a weakened form is represented by a very restricted area, which, year by year is becoming smaller, and may ultimately disappear altogether.

I refer to the dark primeval redwood forests, especially those a short distance back from the coast, which occupy rather broad flattish valleys. Besides the redwoods which 'stand' remarkably heavy are large Sitka spruces (*Picea sitchensis*) western hemlocks (*Tsuga heterophylla*), Pacific cedar (*Thuja plicata*), and north of the Klamath the Lawson cypress (*Chamaecyparis lawsoniana*), all tending to produce a forest of Canadian-like qualities. It is only in favored places that the sun is able to penetrate the heavy foliage of these conifers, and among the cool depths of the forest we encounter real Canadian conditions. The redwood tree itself is not diagnostic, but the Sitka spruce, western hemlock and Pacific cedar while entering Transition—as we would expect from the nature of this zone—are all essentially Canadian trees, being common and characteristic in the Sitkan District. When fully developed they may be taken as marking the limits of the Canadian on the coast of northern California. Stunted groves occur sometimes in the coastal areas I have indicated as Transition, and occasionally in these groves we encounter tiny isolated Canadian islands. Not infrequently such groves were once in the interior of the redwood forest, which has long since been removed. The presence of a small percent Douglas spruces in the heavy forests indicates Transition qualities. In this area I found no boreal plants which are not almost equally characteristic of the cooler Humid Transition.

*Acer circinatum*  
*Achlys triphylla*  
*Berberis aquifolia*  
*Berberis nervosa*  
*Galium boreale* (local Crescent City)  
*Gaultheria shallon*  
*Hippurus vulgaris*  
*Lonicera involucrata*

*Ledum glandulosum* (Crescent City)  
*Menziesia glabella*  
*Oxalis oregana*  
*Rubus parviflorus*  
*Rubus spectabilis*  
*Vaccinium parvifolium*  
*Veratrum californicum*  
*Whipplea modesta*

*Arctostaphylos uva-ursi* is here purely maritime, as is *Pinus contorta*, and apparently, *Abies grandis*. It is not well to insist too strongly on their adequacy for tracing Canadian, tho they are all boreal types of great value.

Several birds emphasize the presence of the Boreal rather decidedly. These are *Bonasa umbellus sabinei* (also Transition), *Perisoreus obscurus*, *Merula m. propinqua* and *Ixoreus naevius*. Such birds as *Columba fasciata*, *Dryobates v. harrisi*, *Chatura vauxi*, *Contopus borealis*, *Cyanocitta s. carbonacea*, *Zonotrichia l. nuttalli*, *Olbiorchilus h. pacificus*, and *Certhia f. occidentalis*, tho ranging freely in to the Humid Transition are essentially Canadian in their nature—that is not Austral. Several distinctively boreal species of small mammals occur in the heavily forested belt. Perhaps none is more striking than the lemming-mouse (*Phenacomys albipes* Merriam).

To summarize. At present it seems that the Northwest Coast Boreal District, in California occupies only a very narrow and restricted belt in the form of dilute Canadian, south to the vicinity of Cape Mendocino. This belt comprises only the densest forests of redwood, Sitka spruce, western hemlock, Pacific cedar and Lawson cypress. All the other country including an open belt along the coast, the more open river valleys, mutilated districts, as well as the mountains immediately to the east of the redwoods belong to the Humid Transition. The Humid Transition still farther east merges into the Arid Transition or belt of the yellow and sugar pines.

(To be continued.)

## Status of the "Arizona Goldfinch" in California.

BY JOSEPH GRINNELL.

SEVERAL persons have asked me why I left the "Arizona Goldfinch" out of the *Check-list of California Birds*. I had what appeared to me good reasons for not considering *Astragalinus psaltria arizonæ* to be a bona fide subspecies at least as occurring in California, and I will here try to explain my standpoint. The following are all the California records of this bird known to me.

*Chrysomitris Mexicanus* COOPER, Am. Nat. VIII, Jan. 1874, 17 (one seen 25 miles north of San Diego).

*Chrysomitris psaltria*, var. *arizonæ* BAIRD, BREWER, & RIDGWAY, Hist. N. Am. Bds. III, 1874, appendix, 509 (Encinetos Ranch, San Diego Co., San Buenaventura).

*Spinus psaltria arizonæ* EMERSON, Zoe I, April, 1890, 44 (Haywards); FISHER, N. Am. Fauna No. 7, May 1893, 85 (Three Rivers); SLEVIN, Bull. Coop. Orn. Club I, July 1899, 73 (Santa Clara); COHEN, Condor III, Nov. 1901, 185 (Alameda); SWARTH, Condor IV, July 1902, 94 (Los Angeles).

I happen to have examined several of the above specimens as well as others not recorded; and I have seen a number of living birds at close enough range to note their general peculiarities. In the ordinary plumage of the adult male *psaltria*, the back, scapulars and ear-coverts are uniform olive-green, with the feathers of the dorsum centrally more or less blackish. In well-marked specimens of so-called *arizonæ*, the whole upper parts together with the ear-coverts and sides of the neck are pervaded with shiny black like the top of the head, sometimes quite as deep and uniform. A bird of the latter type is thus easily distinguished from its fellows of ordinary plumage in a flock at quite a distance, and there seems at first glance good grounds for considering it a distinct and nameable form. But the contrary opinion rests on a number of indisputable facts which may be enumerated as follows:

1. The differences are only evident in the case of the male. A female taken

in company with a male of *arizonæ* shows no discernible differences from female *psaltria* of the same plumage age.

2. The characters of "*arizonæ*" are limited to the peculiar blackening or melanism of the upper parts. A careful comparison of *psaltria* examples with extreme specimens of "*arizonæ*" shows not a single difference in measurements as a whole or proportionately, and there are no other color differences either in extent of white markings or tint of lower surface.

3. The melanism characteristic of "*arizonæ*" is altogether inconstant in quantity. I have seen no two exactly similar examples. Between the extreme of "*arizonæ*" and normal *psaltria* there is every intermediate condition. The melanism begins with the spreading and final coalescence of the dark centres of the dorsal feathers. Black feathers appear in the ear-coverts, which finally become uniform black to their lower limits; not that I believe that any such changes take place in the individual, but only to express the relative conditions in a series of specimens.

4. Those birds called *arizonæ* appear throughout the range of *psaltria* (in California); they are not confined to any particular faunal area. They have not been recorded anywhere where *psaltria* has not, and *psaltria* has been found in no faunal area where specimens "inclining to *arizonæ*" have not. This is an extremely important consideration; for observation has shown us that subspecies (which are incipient species) probably always originate through isolation (either by long distance or intervention of barriers) in separate zoo-geographical areas.

5. There is no definite season of occurrence of the *arizonæ* type which might go to show that it was a regular visitant from elsewhere. It occurs at all seasons and is found feeding and breeding in the same localities and at

the same time with the other gold-finches.

I have concluded from the foregoing that so-called *arizonæ* is only an extreme, and by no means uncommon, male plumage of the Arkansas Goldfinch, in which the black dorsal markings become to a varying degree extended. For this reason I included

*arizonæ* in its various combinations among the synonyms of *Astragalinus psaltria psaltria* in the Checklist. This of course must be understood to apply only to California birds. The status of the *psaltria* group elsewhere may be entirely otherwise. There are no specimens at hand, so I have no means of knowing.

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### Nesting of Swainson Hawk.

BY C. S. SHARP, ESCONDIDO, CAL.

THE Swainson hawk (*Buteo swainsoni*) is one of the most interesting of our western raptors. Less well known, perhaps, because of its quiet and unassuming nature and its lack of propensity to wander but it is one of our most useful birds and well worthy of every protection from the naturalist and the farmer. Indeed there is no one of the raptorial group that is more generally beneficial, for its food supply consists wholly of those four-footed pests which every farmer and ranch man recognizes as among his worst enemies.

Of the breeding hawks of this section although the only one that is not resident, it is the most abundant, and seems to have become more so in recent years than formerly. Previous to 1897 it was quite scarce and I very seldom saw it although I frequently recognized it in descriptions by the small boys here, of a bird they called the "Mexican black hawk" or the "five dollar hawk" from the price of the eggs of that species in Lattin's catalogue. Up to that time *Buteo lineatus elegans* was quite common but *swainsoni* seems to have taken its place to a large extent, and the former is now very scarce—so much so that when in 1896 there were four pair of birds breeding in a stretch of river timber of about two miles there is now only one. All the old nests are occupied by owls or the *swainsoni*.

While *Buteo borealis calurus* is more

common in the higher foothill country *swainsoni* seems to prefer the lower levels and especially favors the fringe of sycamores and cottonwood trees along the rivers, becoming seemingly attached to a certain locality and returning to it year after year. Each pair of hawks seems to have its particular hunting ground and they never stray far from home. The appearance of a pair of these birds in the breeding season is a pretty certain indication that their nest is near. They are indefatigable hunters and from their first arrival until their departure in the fall they may be constantly seen circling high in air or sailing low over fields and hillsides ever on the watch for some luckless squirrel or mouse that has wandered too far from protecting shelter. Of these and other four-footed pests of the farmer, with an occasional lizard or insect it makes its diet and is essentially not a "hen hawk."

It seems to have only a passing fancy for small birds and doubtless would not take them if other food were in plenty. This fact the small birds seem to understand and do not fear to build their nests in the same tree with them. I have found nests of *Icterus bullocki*, *Colaptes cafer collaris*, *Tyrannus verticalis*, *Zenaidura macroura* and *Carpodacus mexicanus frontalis* all in the same tree with *swainsoni* and the nest of the saucy *Carpodacus* was snugly ensconced on the side of the latter. No other



hawk would allow such great familiarity and the smaller birds know it for they do not attempt it with them.

The Swainson hawks arrive here from the south about the 10th to 20th of March, sometimes in large flocks or in bands of a dozen or two. The earliest and largest flocks all go north, the summer residents not coming until a couple or three weeks later, and going at once to their quarters which they refit preparatory to permanent occupancy later on. The species, as it appears in this locality, and so far as I know throughout the state, is of the very dark phase of plumage. I have watched the migrations and the breeding birds here very carefully for several years in the hope of finding a light colored specimen but nothing but the dark phase has ever come under my observation. Specimens of both sexes in my collection show no conspicuous white areas on under parts—indeed no white at all, the body being of a uniform dark brown throughout.

The darkest specimen (a female) shows only a lighter tawny coloring on tibiae, flanks and crissum. The lightest (a younger male) shows much more tawny on tibiae, flanks and crissum and extending up over the belly, and the lining of wings is lighter than in any specimen I have seen, showing whitish darker and tawny barring, the rest being the same dark brown as in other specimens. In view of the present tendency for subdivision it seems strange that this dark phase of *swainsoni* should have escaped. If one compares the bird with the book description—Coues for instance—he will be at a loss to know where to place it for Coues speaks of the "immaculate throat" and "white under parts, etc." which are wholly lacking in the bird we have here. Dr. A. K. Fisher has written me that the dark phase is not wholly restricted as to locality and that there is a seeming tendency among dark birds to develop light colored young and vice versa. I have never observed such an

occurrence here. I am not wholly a believer in the present hair-splitting tendency for subdivision but it seems to me that one dark phase of *Buteo swainsoni* should be worthy of recognition.

The nest of the Swainson hawk is the usual bulky, unsightly mass of sticks of the raptore, and is placed near the top or on a small outlying branch of a cottonwood or sycamore at an elevation of about 50 feet. (My records run from 35 to 75 feet.) Occasionally a live oak will be taken but as I know of only one such instance, it can hardly be considered regular in this section, at least.

If disturbed from the nest the bird will glide gently away without a sound, sometimes to a nearby tree where it will sit until the intruder is gone but most always to a distance of a quarter or half a mile where it will sail in wide circles in apparent indifference. Although the birds—even if their eggs are taken—will return to the same locality year after year and generally to their first nest I have never known them to attempt a second set in a nest just disturbed.

They sometimes will occupy an old nest nearby, but in almost every instance in my experience have built a new nest quite near to the old one but a little higher up and a little further out towards the end of the branch, as though they had learned wisdom by experience. On May 5, 1901 a set of two eggs was taken from a sycamore about fifty feet from the ground, nowhere near the top of the tree. The birds moved to another sycamore 200 yards away and by May 12 a week later, had built another nest at the *top* of the tree and seventy-two feet from the ground. This also contained two eggs which were taken. The birds then moved on a few hundred yards to a much taller sycamore and built a nest in the top of that, and well out of reach and raised their young in peace.

The new nest built for this second set was, naturally, a very poor affair,

being scarcely more than a shell and almost flat, very different indeed from most of the new ones I have examined. They usually show more art in construction than those of other raptors, being made of smaller and thinner sticks and twigs and are more smoothly put together, showing fewer projecting ends from the sides. The lining is usually of leaves of the tree the nest is in; sometimes a little grass or some willow bark or rabbits' or squirrels' fur. Nesting begins in April. My earliest record is April 15. Fresh eggs may be taken until the middle of May, but the later ones are second sets. Third sets are very unusual and show an amount of perseverance in the birds that should be respected.

Almost all the sets from this section

that I have seen are lightly marked. One set in my collection shows only a few very small "pen splashes" of black; another shows "pin point" spots of lavender almost all over one egg, while the other is practically spotless. This set is a modified pyriform in shape, another set with a creamy ground color has the markings, shape and size of a certain phase of *Buteo lineatus elegans* and if I had not seen Mme. Swainson leave the nest I should have mistaken it for that species.

I find sets of two and three in about equal numbers never anything more, but on May 26, 1901, I found a nest containing one newly hatched young and no trace of another egg. This is the only case of one that I have met with.

#### The Audubon Warbler in Washington.

BY J. H. BOWLES, TACOMA, WASH.

**A**UDUBON Warbler (*Dendroica auduboni*) is the largest, handsomest and hardiest of all the warblers found in the state of Washington, where it is a fairly common summer resident. In their habits and general appearance they are exceedingly like their close relative of the east, the yellow-rumped or myrtle warbler (*Dendroica coronata*), which also occurs on the Pacific coast in limited numbers. It is, perhaps, unnecessary to add that the yellow throat of *auduboni* easily distinguishes it from the white throat of *coronata*.

It would be difficult to say just when the first of them make their appearance from the south, or when they return, as I have strong suspicions that a few remain with us throughout the year. The main force of the migration occurs about the middle of April, and by the second week in May all have passed northward excepting such as intend to nest. The return trip occurs about the last of September. They are essentially birds of the prairie regions, where scattering clumps of fir are plen-

tiful, seldom being seen in the deep woods.

The food supply consists of small insect life of all kinds, and they are most expert in the art of flycatching in mid-air. Socially inclined toward mankind, spending much of their time on and around houses in cities, beautiful in plumage, and graceful on the wing, their song is the only disappointing thing about them. It is a short, though pleasing, little warble, surprisingly feeble for so large a bird, and in no way equal to that of its smaller relative the yellow warbler (*D. aestiva*).

It is in their nesting habits, however, that *auduboni* show their most interesting and original traits, as the first nests are built before any but the most careful observers know that the birds have arrived from the south. My earliest nesting date is April 22, when my brother, Mr. C. W. Bowles, found a nest containing four eggs within a day of hatching. As the period of incubation for these birds is twelve days, this would have made the first egg laid not later than April 8. Nor is this such an



unusually early date, as it is nothing uncommon to see the young flying about during the second week of May. The large majority of first sets are laid by April 25, at latest, but their habits are most irregular as I have found fresh sets on the following dates: April 23, May 25, June 4, and June 26, while young just out of the nest on May 28 would have made the eggs laid about May 5. Nor were those all the results of the first sets being broken up, as many of the birds were seen loitering around for over a month before starting in on nest building. That a second set is often laid, after the first brood has been raised is beyond a doubt, as several times in the case of late nests I have found near by the nest used for the first brood.

The nest found on April 22 is an excellent illustration of how little these birds fear mankind. It was found in a small park situated in the center of the city of Tacoma, and was placed in a small fir only ten feet over a path used by hundreds of people every day, and a favorite playground for children. This rule does not always hold good, however, as I have found nests situated at a distance of several miles from civilization.

The nest is a well built, bulky structure, the largest of any of our warblers, measuring externally 3.5 inches in width by 2.5 in depth; internal dimensions 2 inches in width by 1.5 inches in depth. It is very handsome, as a rule, being built of fir twigs, everlasting weed, rootlets, moss and dried grass, with a thick lining of horse hair and feathers. Its location is generally close to the main trunk on one of the large lower branches of some large, solitary

fir, or one of a grove of firs, on a dry, level prairie. I have never seen a nest placed otherwise than directly on a large branch, never in a crotch. It is always so well protected from the light that I have never been able to obtain a photograph. The nests are for some reason never placed far from the ground, the highest I have seen being twenty feet up, the lowest only six feet. There is never the slightest attempt at concealment, and they are so easy to see that almost every nest I have found has been a surprise to me in this respect.

All of the nests that I have seen contained four eggs as the complete set, but Mr. P. M. Silloway, of Montana, found a nest in the Flathead Lake region that differs in almost every respect from anything I have ever seen. It was placed in a crotch of a small willow tree and contained five eggs.

In coloring they vary to a considerable extent, though the ground color is always constant, as is the case with all the warblers eggs known to me. The ground color is a dead white, with a tinge of greenish that is invariably there though not particularly strong. The markings vary in different sets from small black spots sparingly scattered over the entire egg, to eggs handsomely ringed around the larger end with dots and blotches of red brown, black and lavender. In shape they vary from rather short ovate to long oval, while they are subject to considerable variation in dimensions. The largest egg in my collection measures .75x.55 inches, the smallest .67x.50 inches. A measurement of sixteen specimens shows an average of .70x.54 inches.

#### A Study of the Black-headed Grosbeak.

BY ANNA HEAD, BERKELEY, CAL.

THE scene is a nook in the wooded Coast Range of Mendocino county, California. To the east rises the peak of Mt. Sanhedrim, snow-covered

till well into the summer, a secure retreat for deer, grouse and mountain quail. Clear, cold streams tumble through every gorge and crevice in the

pine-covered hills that surround the little valley. The mountain glades and wide pastures are edged with an open growth of oak, madrone and manzanita, —a veritable paradise for birds of a wood-loving nature, like the warblers, vireos and fly-catchers; while a small marsh bordered by willows gives a congenial home to water-lovers, the red-wing, the song-sparrow, and the long-tailed chat.

Bird music is to be heard in every direction, and the morning concert has no lack of star performers; the russet backed thrush, the western robin, the summer warbler, and the goldfinch being prominent. But among them all there is no more joyous, exuberant or constant singer than the black-headed grosbeak. The thrush is surely a soloist, and chooses the silence of evening or the darkest shades of the laurel-groves to transfigure with his golden chain of melody. But the grosbeak is not so exacting. He sings in the glare of the hottest noon, or in pouring rain; in the orchard or in the forest. His note seems the very voice of summer, as

that there are too many of him. Their voices can be heard from every little nook and side canyon, answering each other, or more often singing all at once, for they do not seem to have time to listen to what the other fellow has to say. Each pair has its particular haunt, and most of them some individual peculiarity of note, by which it can be known that they stay about the same spot. One which lives in a thicket to the south of the marsh has as the climax of his song frequently recurring strtain of these notes, sung;



Another has a double series of triplets, the second on a lower pitch, to which might be set the syllables *bib-ble-y bub-ble-y*. A third repeats all this well marked melody:



the song-sparrow's is of the first spring day, of thawing brooks, greening meadows and budding willows.

There is no minor cadence in his music. The rhythm is distinct, lilting, like a dance of fays. He delights to pour it out, swinging on an oak twig above your head, with the bright sunshine lighting up his orange and black coat. At times he even shares the nature of the skylark in singing on the wing. I have seen one come winging across the hollow, airy spaces of the canyon, singing most gloriously all the way.

The grosbeaks are the most numerous of all birds here. In fact if a fault is to be found with this merry fellow, it is

If this bird were not such a merry, joyous singer, still his striking appearance and fearless, confiding nature should make him a favorite wherever he is known. His coloring is a striking combination of orange, black and pale yellow. The orange breast is the first thing to attract notice, contrasting as it does with the black head and back. Then, as he flits about, you notice the yellow lining of his dark wings, and and the yellowish wing-bars. His mate, as she broods on her nest, shows her affinity to the sparrows, protective utility having prevented the upper surface from developing such striking contrasts as in the case of the male. She has a

neat combination of brown, blackish and white stripes on the head, not unlike *Zonotrichia leucophrys*, and dull irregular streakings on the back. But when she flies, she looks almost as gaudy as her mate, for her breast is a bright, tawny yellow, and her wings and tail are marked like his.

Their flight is wavy and finch-like, and as they fly their wings make a soft "p-r-r-t—p-r-r-t" like a canary's. As they flit about the tall oaks, which here have a drooping growth very like the eastern elm, nipping off the buds, they have a characteristic habit of springing to the end of a drooping spray and clinging there, back downward, looking much too heavy for such a position. They are usually found in white oaks or madrones, seeming to love the sunshine and the light, open foliage. I have never seen them alight on the ground, as the robin, which somewhat resembles the male in color, so often does.

The difference between the songs of different individuals have been already referred to. This strong individuality is a marked characteristic of the grosbeak, and one which makes them very attractive to those who watch him carefully. But in analyzing the song of any individual, you will also be astonished to find what a variety it contains. There are two entirely distinct types of song, so different that I am sure no one hearing them for the first time without seeing the bird, could imagine that they came from the same throat. The usual well-known song is loud and rollicking, a series sometimes of as many as sixty distinct phases of three or four notes, each with marked accent and great variety in the melody. The rhythm is the most noticeable thing, and that by which the song is recognized. From time to time, but only on very bright days, when the bird's heart is too full of joy for this ordinary means of expression, comes as an interlude, the second song, a truly rapturous out-pouring of the bird's soul. It is given in a

softer voice, a fine, high, clear quality of tone, full of retards and diminuendos, trills and shakes like the canary's highest notes. It reminds one of the minor interludes in one of Chopin's mazurkas, where the minor cadence and hesitating rhythm only serve to intensify the rapture of the mood. Like Chopin, he always returns from this land of sifting moonbeams and quivering, silvery light to the ordinary world of sun and action.

This secondary song has been well described by Olive Thorne Miller in "A Bird Lover in the West." The birds whose note most nearly resembles the grosbeak's are the robin, the oriole, and the tanager. Possibly the reason he is so little appreciated is that his song is often mistaken for the robin's and the credit given to the better known bird. I know that was what I did at first. I noticed one day that a certain "robin" had invented some new passages—trills and turns—in his song, and said to myself, "There is a robin of genius, I must look him up." But when I found the singer it was a grosbeak, and so it often happens, till I gradually learned to distinguish their notes. The robin's has far less variety, and is sung chiefly in early morning and evening.

Whatever the reason that the grosbeak is generally so little known and appreciated, anyone who will learn to know him thoroughly, will feel as I do, that he has a friend for life, and that a new joy has entered into the summer. I like to think of my last visit to my favorite pair, when, lying in the long grass, I watched the stars come out. The song of the male rang out well with the last rays of the sun, and after twittering softly to his mate on the nest he took up a place in a bush close to my head and sang a soft good-night. And so I leave them, safe in their very insignificance, lost without any effort at concealment, their home just like thousands of others among miles and miles of tree-covered mountains, unsought and unharmed.

Lierley's, June 8th, 1902.

## THE CONDOR.

Bulletin of the

### COOPER ORNITHOLOGICAL CLUB OF CALIFORNIA.

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This issue of *The Condor* was mailed Sept. 15.

### EDITORIAL.

*Pacific Coast Avifauna No. 3*, consisting of  
'A Check-list of California Birds' by Joseph  
Grinnell, was mailed to paid-up active Club  
members on July 17. Delinquent members  
may secure the checklist by remitting their  
dues for 1902.

Without considering the weighty questions  
of synonymy, nomenclature and the like, the  
present checklist must prove abundantly useful  
to those whose labors are cast in Californian  
fields. Perhaps the amateur ornithologist will  
experience his chief delight in the realization  
that he can 'place' the song sparrow or towhee  
of his locality with some degree of accuracy—  
granting that the claims for the existence of all  
the recognized subspecies are valid—and we  
believe they have been thoroughly worked out  
by the author of the checklist.

To those who occasionally delve into the  
earlier publications on California birds, Mr.  
Grinnell's synonymy will prove exceedingly  
useful in locating a bird under its old name.  
Considering the aid unquestionably rendered  
the amateur by this list, it behooves Californian  
workers to adopt it for future work. Such  
action would cast no odium on the standard  
American checklist; it is question of utility and  
to the average Californian the Club checklist  
offers the best handle by which to grasp the all-  
important question of distribution.

Mr. Grinnell's effort is therefore of distinctly  
great assistance to Californians. In justice to  
its author we may state that the entire proof  
of the checklist was read and the work seen  
through the press by Mr. Grinnell in person.

In our last issue we had occasion to refer to a  
mis-labeled CONDOR illustration which had ap-  
peared in *American Ornithology*. We have  
received a communication from Mr. H. T.  
Bohlman, of Portland, Oregon, owner of the  
photograph, in which he states that a series of  
prints had been sent Mr. Reed with instruc-  
tions not to publish them without further ar-  
rangement. It is further represented that Mr.  
Reed lacked an illustration to accompany an  
article on the purple grackle and that the print  
of a group of young Brewer blackbirds was  
used to fill the void, the title being conveni-  
ently changed.

Club members and subscribers are requested  
to promptly notify this office of change of ad-  
dress. Such changes are promptly and cheer-  
fully noted, but we can assume no responsibil-  
ity for supplying back numbers where such no-  
tice is not given.

### COMMUNICATIONS.

#### TO THE EDITOR:

With your permission I wish to say a word  
to the readers of *THE CONDOR* and especially  
to those who are citizens of, as well as ornithol-  
ogists in the states of California, Oregon, Nev-  
ada and Utah.

Mr. Bailey in the last paragraph of his article  
"Unprotected Breeding Grounds" in the May-  
June number of *THE CONDOR*, sounds a note of  
warning in regard to certain of the marsh and  
water birds, but especially of the grebes; his  
statement that thousands of grebe skins are  
shipped from one lake alone can be verified by  
a visit during the winter months to any of the  
great cities of the north and east where anyone  
can see large numbers of muffs and shoulder  
capes made entirely of grebe skins, and other  
garments, as well as bonnets trimmed with  
them. The writer has counted as many as  
thirteen grebe breasts in one shoulder cape.

As the Chairman of the National Committee  
of Audubon Societies I appeal to the bird stu-  
dents of the four states in question to take this  
matter in hand at once and see that steps are  
taken to have good bird laws passed at the next  
sessions (1903) of the legislatures of the four  
states named. There is barely four months yet  
before the several legislatures will assemble,  
which is only too short a period in which to  
create a sentiment in favor of bird protection  
and good bird legislation. If such legislation  
cannot be secured during the next sessions no  
other opportunity will be offered until 1905,  
and in the interval of two years untold damage  
to the birds of California, Oregon, Nevada and  
Utah will be done.

Very truly yours,

WM. DUTCHER,

Chm. Nat'l. Com. Aud. Societies.

New York City, June 10, 1902.

## GENERAL NEWS NOTES.

N. R. Christie, one of Colorado's early ornithologists, is now located in San Francisco.

Joseph Mailliard, the well known San Geronimo ornithologist, sailed August 4 for Valparaiso, Chili, where he expects to remain until next spring.

Harry S. Swarth and O. W. Howard have returned from an extended trip into the mountains of Arizona, and bring back with them a host of interesting and valuable material.

Leverett M. Loomis presented a paper entitled 'Recognition of Geographical Variation in Nomenclature' before the Section of Ornithology of the Academy of Sciences on Sept. 2.

W. Earle Mulliken, formerly of Grand Rapids, Mich., where he was prominently identified with the Michigan Ornithological Club, is attending the State University at Berkeley, Cal.

A. I. McCormick was wedded to Miss Edith Coates in Los Angeles on August 27. Mr. McCormick's good field work has been conspicuous by its absence during the past year or two, but we learn that he will resume it shortly.

The *Albatross* expedition, which has been engaged in general zoological work among the Hawaiian and adjacent islands has returned. The Cooper Club was represented in Dr. Chas. H. Gilbert, Walter K. Fisher and Jno. O. Synder.

In the *Proceedings of the Biological Society of Washington* Chas. W. Richmond renames the gray titmouse (*Parus inornatus griseus*). The name *griseus* is found to be preoccupied and the new name of *Parus inornatus ridgwayi* is proposed.

H. R. Painton, a founder of the Cooper Ornithological Club, was united in marriage on July 3 to Miss Emma J. Addicott at Felton, Cal. Mr. Painton has largely given up ornithology owing to other duties and is now principal of a school at South San Francisco.

The Yearbook of the Department of Agriculture for 1901 (just issued) contains an excellent paper by Dr. A. K. Fisher on 'Two Vanishing Game Birds: The Woodcock and the Wood Duck.' It is to be hoped that Dr. Fisher has sounded the warning in time to preserve these two interesting species.

The Biological Survey has issued Circular No. 37 entitled 'Regulations for the Importation of Eggs of Game Birds for Propagation.' The circular recites the regulations which must be followed, and those contemplating the importation of eggs should familiarize themselves with the requirements.

Mr. Chapman has recently described *Lagopus leucurus peninsularis* and *Cyanocitta stelleri borealis* from the Kenai peninsula, Alaska. Despite our friend's desperate stand against slender subspecies, we feel persuaded he will ultimately join the ranks of the hairsplitters. Splitting is simply fascinating!

The current issues of *Novitates Zoologicae* (IX, No. 2) contains an interesting paper entitled 'Further Notes on the Fauna of the Galapagos Islands' by the Hon. Walter Rothschild and Ernest Harter. Included in the paper are the field notes of R. H. Beck on the tortoise of the group, together with several illustrations.

The Biological Survey has recently issued a large chart showing the close seasons on all classes of game for each state in the Union. The chart is prepared in an admirably condensed and practical form and is known as Farmer's Bulletin No. 106. It is worth noting that the Biological Survey is devoting increasing time to the work of game protection and with results.

The Beck expedition to the Galapagos Islands returned August 15, bringing a cargo of giant tortoises, land iguanas, some 600 bird skins and other scientific material. It is thought that some of the tortoises are the largest even taken, and Mr. Beck will shortly take the collection to England, for which point it was originally destined. Mr. Beck secured many interesting photographs, some of which we hope to reproduce later.

Chas. R. Keyes, senior vice president of the Cooper Club, made an important 'capture' during his summer's vacation, which was spent at his Iowa home. On August 5 at Blairstown, Ia., he was united in marriage to Miss Sarah M. Nauman, after which Mr. and Mrs. Keyes journeyed westward to Berkeley, where Mr. Keyes is an instructor at the State University. We tender warm congratulations on behalf of an appreciative Club!



### Official Minutes Southern Division.

The Division met June 28 at the residence of F. S. Daggett in Pasadena, President Daggett presiding and six members present. John B. Feudge of Highland Park, Cal., was elected to active membership. Mr. Judson exhibited a nest of the yellow warbler containing one egg of the warbler and one of the cowbird; this is the first known record of the latter's occurrence in this county. Mr. Gaylord gave a description of Guadalupe Island and an account of the animal life found thereon. Extended discussion on various bird subjects was indulged in.

H. J. LELAND, Sec'y pro tem.

#### AUGUST.

The Division met August 30 at the residence of O. W. Howard in Los Angeles with eleven members present. G. Frean Morcom was present as a visitor. The names of J. G. Brown and Lester Hart of Santa Monica were proposed for active membership.

Mr. Howard placed on exhibition part of his collection of eggs and nests taken in Arizona this season. Nearly all the rarer Arizona eggs were represented and the nests were arranged to show as nearly as possible their natural positions. Limbs containing nests of the Californian and Arizona woodpeckers were preserved complete. Several sets of Mexican goshawk were in the collection. Mr. Howard related many interesting experiences in collecting various sets, his method of obtaining nests at the end of long limbs having been described in the CONDOR.

HOWARD ROBERTSON, Div. Secretary.

### Official Minutes Northern Division.

#### SEPTEMBER.

The Division met Sept. 6 at the residence of C. Barlow in Santa Clara, president Grinnell presiding. Clayton G. Siefert of Auburn was elected to active membership. The application of W. M. Pierce of Claremont, Cal., to become an active member was placed on file. Remarks were made by Mr. Emerson looking to arrangements for the State Meeting in 1903.

Mr. Grinnell formally announced the death of Dr. James G. Cooper, an honorary member, at Haywards on July 19. A paper "In Memoriam" was read by W. Otto Emerson dealing with the personality of Dr. Cooper. Mr. Grinnell read a paper entitled "The Published Writings of Dr. J. G. Cooper." Other papers of the evening were "Some Observations on the Rufous-crowned Sparrow," by C. Barlow and "A Study of the Black-headed Grosbeak"

by Miss Anna Head. A vote of thanks was tendered to the widow of the late Dr. Cooper for donations to the library of the Club. On motion the Club adjourned to meet next at Palo Alto Nov. 1.

C. BARLOW, Div. Secretary.

### PUBLICATIONS RECEIVED.

CHAPMAN, F. M. List of Birds Collected in Alaska by the Andrew Stone Expedition of 1901. (Bull. Am. Mus. Nat. Hist. XVI, Art. XIV).

DEANE, RUTHVEN. Unusual Abundance of the Snowy Owl (*Nyctea nyctea*) in New England and Canada. (Repr. The Auk, XIX, No. 3, July, 1902).

SHUFELDT, DR. R. W. Osteology of the Psittaci. (Repr. Annals of the Carnegie Museum, I, pp. 399-421, 1902).

WHEELLOCK, IRENE GROSVENOR. Nestlings of Forest and Marsh. (A. C. McClurg & Co., Chicago, pp. 257 and numerous half-tones and text figures. \$1.40).

American Ornithology, II, Nos. 8, 9, Aug., Sept., 1902.

Annual Report Smithsonian Institution 1900. (Issued 1902).

Biological Survey Circular No. 38. Interstate Commerce in Birds and Game.

Bird-Lore, IV, No. 4. July, Aug., 1902.

Journal of Maine Orn. Society, IV, No. 3, July 1902.

Maine Sportsman, IX, No. 108, Aug. 1902.

Nature Study, III, Nos. 2, 3, July, Aug. 1902.

Notes on Rhode Island Ornithology, III, No. 3, July 1902.

Novitates Zoologicae, IX, No. 2. July 25, 1902.

Osprey, I, No. 6, June, 1902.

Our Animal Friends, XXIX, No. 12, Aug. 1902. XXX, No. 1, Sept. 1902.

Our Dumb Animals, XXXV, Nos. 2, 3, July, Aug. 1902.

Out West, XVII, No. 2, Aug. 1902.

Plant World, V, Nos. 6, 7, June, July 1902.

Popular Science, XXXVI, Nos. 8, 9, Aug., Sept. 1902.

Proceedings Biol. Society of Washington, XV, pp. 161-190. Aug. 6, 1902.

Proc. Manchester Inst. of Arts & Sciences, III, 1901.

Recreation, XVII, No. 2, Aug. 1902.

West American Scientist, XII, No. 14, July; XIII, No. 1, Aug. 1902.







*Bulletin of the Cooper Ornithological Club*, Vol. I, No. 3. We have secured two copies of the above number which are offered at 75 cents per copy. Address the business office. Stamps not desired.

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II, complete; Vol. III, complete; IV, Nos. 2, 3, 4, 5, 6, 7. *Osprey*, Vol. II, Nos. 1, 3, 4, 6, 7,

9, 10. *Natural Science Journal* Vol. I, No. 1; *Sports Afield*, Vol. XVIII, No. 3; *Bull. Michigan Orn. Club*, Vol. I, Nos. 3, 4; *Oberlin Grackle Roost*; *Story of the Farallones*; *Birds of Michigan*; *Birds of Colorado* (Bulletin No. 7); *The Common Crow*; *The Food of Woodpeckers*; *Death Valley Expedition of the Biological Survey*; *Birds*, Vol. II, No. 1. Address J. S. & J. B. DIXON, Escondido, Calif.

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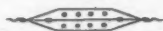
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